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60130-984

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Le Hir, et al
Serial No.: 09/760,017
Filed: January 12, 2001
Group Art Unit: 2834
Examiner: Tamai, Karl L.
Title: A MOTORIZED REDUCTION GEAR WITH A COMMUTATOR HAVING AN INTEGRAL MAGNETIC RING

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

APPEAL BRIEF

Dear Sir:

Subsequent to the filing of the Notice of Appeal on March 17, 2003, Appellant hereby submits its brief. A check in the amount of \$320.00 is enclosed. Any additional fees or credits may be charged or applied to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

REAL PARTY IN INTEREST

The real party in interest is Meritor LVS France, the assignee of the entire right and interest in this Application.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1, 4, 5 and 8 stand finally rejected under 102(b). Claims 2, 3, 6 and 7 are withdrawn from consideration.

STATUS OF AMENDMENTS

The amendment filed on February 17, 2003 was not entered. Appellant submitted another amendment on March 17, 2003 including most of the amendments filed on February 17, 2003, which was entered.

Applicant has filed on May 19, 2003, an Amendment After Final clarifying claim 4. The examiner has indicated he will enter this Amendment, and the claims in the Claim Appendix reflect this amendment.

SUMMARY OF THE INVENTION

As shown in Figure 1, this invention relates to a motorized reduction gear 1 including a rotor 1. The rotor 1 is provided with a rotor shaft 5 having a commutator 9. The commutator 9 has a body with an inner surface mounted on the rotor shaft 5. The commutator 9 also has an opposing outer surface. The motorized reduction gear 1 further includes a reduction gearbox 13 that contains a gear wheel that engages a worm 8 of the shaft 5. A magnetic ring 14 is attached on the outer surface of the body of the commutator 9 to count a number of rotations of the shaft 5. This basic structure is set forth in Claim 1.

Claim 4, which depends on claim 1, adds that the magnetic ring 14 is housed in an annular recess 21 located at an end of the commutator 9. Claim 5, which also depends on claim 1, adds that the magnetic ring 19 is elastically clipped onto an annular extension 25 of the commutator 9.

ISSUES

- A. Are Claims 1, 4, 5 and 8 properly rejected under 35 U.S.C. 102(b) based on Schechinger?
- B. Is Claim 4 rejected under 35 U.S.C. 102(b) based on Schechinger?
- C. Is Claim 5 rejected under 35 U.S.C. 102(b) based on Schechinger?

GROUPINGS OF CLAIMS

- A. The rejection of Claims 1, 4, 5 and 8 is contested.
- B. The rejection of Claim 4 is separately contested, that is, the rejection of the Claim does not stand or fall with the rejection of the other Claims.
- C. The rejection of Claim 5 is separately contested, that is, the rejection of the Claim does not stand or fall with the rejection of the other Claims.

PATENTABILITY ARGUMENTS

A. The rejection of Claims 1, 4, 5 and 8 under 35 U.S.C. 103(a) is improper.

The Examiner finally rejected Claims 1, 4, 5, and 8 as being anticipated by Schechinger (French Patent No. 2,663,798). Schechinger does not disclose a commutator having a magnetic ring attached to an outer surface of the commutator, the outer surface being opposite to the inner surface of the commutator that is mounted on the shaft. As shown in Figure 2, Schechinger discloses an electromotive drive device 10 having a spacing bushing 33a mounted on a drive shaft 14. A magnetic wheel 34a is located outwardly on the spacing bushing 33a. The magnetic wheel 34a is pressed against a stop to prevent play of the magnetic wheel 34a on the spacing bushing 33a. It is disclosed that the stop can be the commutator 15.

The present invention is patentable and strikingly different from Schechinger. As described by the claims, the present invention provides a motorized reduction gear having:

a rotor provided with a rotor shaft bearing a commutator including a body having an inner surface mounted on said shaft and an opposing outer surface, and a reduction gearbox containing a gearwheel engaged with a worm of said shaft, and a magnetic ring mounted on said shaft in order that a number of rotations of said shaft can be counted, and wherein said magnetic ring is attached on said outer surface of said body of said commutator.

[See Claim 1]. Claims 1, 4, 5 and 8 of the present invention all share this same or similar feature.
[See Claims 1, 4, 5, and 8].

In Appellant's claimed invention, the commutator has an inner surface and an opposing outer surface. The inner surface of the commutator is mounted on a shaft, and a magnetic ring is attached on the outer surface of the commutator.

Schechinger does not disclose that the magnetic wheel 34a is attached on an outer surface of a commutator 15 as required by Appellant's claims. In Appellant's claims, the commutator includes an inner surface mounted to a shaft and an opposing outer surface. In Schechinger, the inner surface of the commutator 15 is mounted on the shaft 14, and nothing is illustrated or described as being attached to the opposing outer surface of the commutator 15. The magnetic wheel 34a of Schechinger is not attached on the outer surface of the commutator 15, nor does the magnetic ring 34a even contact the outer surface of the commutator 15. Rather, the magnetic wheel 34a is pressed against a side of the commutator 15, so that the commutator 15 can act as a stop.

The side of the commutator 15 that the magnetic wheel 34a is pressed against is not opposite to the inner surface of the commutator 15. As shown in Figure 2 of Schechinger, nothing is mounted or attached to the outer surface of the commutator. That is, nothing is attached or mounted to the side of the commutator 15 that is opposite to the inner surface of the commutator 15 (the inner surface being the surface that is mounted on the shaft 14). The magnetic wheel 34a of Schechinger is not mounted on an outer surface of the commutator 15 as required by Appellant's claims. Schechinger does not disclose Appellant's claims, and Appellant requests that the rejection be withdrawn.

Additionally, Appellant's claims require that the magnetic ring is attached to the outer surface of the commutator. In Schechinger, as disclosed on page 4, lines 2-3, the commutator 15 acts as a stop for the magnetic wheel 24a, and the magnetic wheel 34a is pressed against the commutator 15. Schechinger does not disclose that the magnetic wheel 34a is attached to the commutator 15 in any

way as required by Appellant's claims. Schechinger does not anticipate Appellant's claims, and Appellant requests that the rejection be withdrawn.

B. The rejection of Claim 4 under 35 U.S.C. 102(b) is improper.

The rejection of Claim 4 is separately contested from the rejection of Claims 1 et al. Claim 4 sets forth that the magnetic ring is housed in an annular recess located at an end of the commutator. Schechinger does not disclose that the commutator 15 includes any annular recess, nor does it disclose that the magnetic wheel 34a is housed in any annular recess. Schechinger only discloses that the magnetic wheel 34a is pressed against a stop, such as a commutator 15. Claim 4 is further not anticipated.

C. The rejection of Claim 5 under 35 U.S.C. 102(b) is improper.

The rejection of Claim 5 is separately contested from the rejection of Claims 1 et al. Claim 5 sets forth that the magnetic ring is elastically clipped onto an annular extension of the commutator. In Schechinger, it is disclosed that the magnetic wheel 34a is pressed against the commutator 15, and the commutator 15 acts as a stop. Schechinger does not disclose that the commutator has any annular extension, and therefore Schechinger does not disclose that the commutator is elastically clipped onto an annular extension of the commutator 15. Claim 5 is further not anticipated.

CLOSING

For the reasons set forth above, the rejection of all claims is improper and should be reversed.
Appellant respectfully requests such an action.

Respectfully Submitted,

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Dated: May 19, 2003

CERTIFICATE OF MAIL

I hereby certify that the enclosed Appeal Brief is being deposited in triplicate with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450 on this 19th day of May 2003.

Tracey Belanger
Tracey Belanger

CLAIM APPENDIX

1. A motorized reduction gear comprising:

a rotor provided with a rotor shaft bearing a commutator including a body having an inner surface mounted on said shaft and an opposing outer surface, and a reduction gearbox containing a gearwheel engaged with a worm of said shaft, and a magnetic ring mounted on said shaft in order that a number of rotations of said shaft can be counted, and wherein said magnetic ring is attached on said outer surface of said body of said commutator.

2. The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is overmolded on said body of said commutator.

3. The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is housed in an annular recess located on said body of said commutator, on which said magnetic ring is adhesively bonded.

4. The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is housed in an annular recess located at an end of said commutator.

5. The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is elastically clipped onto an annular extension of said commutator.

6. The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is attached to one end of said commutator by at least two screws substantially parallel to an axis of said commutator.

7. The motorized reduction gear as recited in Claim 1 wherein said magnetic ring is housed in an annular recess located on said body of said commutator, on which said magnetic ring is overmolded.
8. The motorized reduction gear as recited in claim 4 wherein said end of said commutator is free of hooks.

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